

USSR

DRITS, M. YE., et al., Struktura, i svoystva legk. splavov, Moscow, Nauka Press, 1971, pp 78-81

alloy do not reduce the strength characteristics of the alloy, but increase its resistance to the process of development and spread of the cracks.
3 illustrations and a 4-entry bibliography.

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Mechanical Properties:

USSR

UDC 620.17:669.71'721

PETROVA, E. N., GERASIMOVA, L. P., and KOROL'KOV, A. M.

"Properties of the Alloy Al-9.5% Mg with Titanium, Zirconium, Molybdenum, and Boron under Tension and Impact Loadings"

Moscow, Metallovedeniye, No 5, 1971, pp 6-8

Abstract: The effect of the alloying elements Ti, Zr, Mo, and B on the mechanical properties and structure of the alloy Al-9.5% Mg was investigated under tension and impact loading conditions. The source of the increased tendency of Al-Mg alloys to formation of cracks was studied on the IMASH-5S-65 installation of the Institute of Machine Studies. Introduction of the additions in quantities of 0.05-0.1% increases the impact ductility. Additions in quantities of 0.5% bring about a sharp decrease of the impact ductility. These relations comply with the resistance to rupture by tension, as determined by the character and distribution of surplus phases. One figure, one table, three bibliographic references.

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USSR

UDC 669.721.5'5'296:620.193.4

TIMONOVA, M. A., AL'TMAN, M. B., TIKHONOVA, V. V., GERASIMOVA, M. N., TOKIAKOVA, G. S., LASHKO, N. F., MOROZOVA G. I.

"Effect of the Composition and Structure of Alloys of the Mg-Zn-Zr System on their Corrosion and Electrochemical Behavior"

V sb Struktura i svoystva legk. splavov (Structure and Properties of Light Alloys -- collection of works), Moscow, Nauka Press, 1971, pp 136-140 (from Rzh-Metallurgiya, No 4, Apr 72, Abstract 41700)

Translation: A study was made of the effect of Zn on the structure and corrosion behavior of alloys of the Mg-Zn system and the Mg-Zn-Zr system with a Zn content of up to 20%; the effect of heat treatment leading to a change in the phase composition and in the quantity and shape of the segregations of intermetallide compounds on the corrosion strength of the alloys of the Mg-Zn-Zr system was also studied. The variation of corrosion resistance of the alloys is explained by the formation of cathode phases with different electrochemical properties and variation of their number and form of segregation. The increase in corrosion resistance with the introduction of Zr into the alloys of the Mg-Zn system is primarily connected with a decrease in the Fe admixture in the alloys. Six illustrations, one table, and a 6-entry bibliography.

1/1

- 16 -

Acc. Nr:

AP0034768

Ref. Code: UR 0241

PRIMARY SOURCE: Meditsinskaya Radiologiya, 1970, Vol 15,
Nr 1, pp 60-67

A UNIT FOR THE WHOLE-BODY RADIOMETRY

V. Ya. Vanin, M. P. Gerasimova, V. P. Stolyarov

Summary

Parameters of a spectrometer at different stages of its exploitation designed at the Institute of biophysics for measuring radiation emitted in man and consisting of a detector with a NaI(Tl) crystal and a protective steel chamber are presented. Spectrometric resolution of the unit in 662 keV γ -line for a fantom filled with a Cs^{137} solution and a NaY(TE) crystal of 203 mm diameter and 102 mm high was 10.4%. During 15-minute long measurement the sensitivity of the spectrometer enables it to determine the presence of 0.6×10^{-6} C of Cs in the organism with an accuracy better than 68%. Parameters of spectrometers of radiation emitted by man now employed in the USSR are cited.

D.H.

REEL/FRAME

19711478

02

Entomology

USSR

UDC 595.775

GERASIMOVA, N. G., and GAVRIKOVA, Ye. A., Guryevsk Anti plague Station

"The Lifespan of *Xenopsylla skrjabini* Ioff and *Xenopsylla nuttalli* Ioff Fleas"

Leningrad, Parazitologiya, Vol 4, No 4, Jul/Aug 70, pp 385-388

Abstract: Experimental data are presented on the effect of temperature and relative humidity on the lifespan of *X. skrjabini* and *X. nuttalli*. Survival of the fleas was studied over the temperature range from 8 to 34°C at relative humidities ranging from 35 to 92%. It was found that the lifespans were shortened with increasing temperature and decreasing humidity. Female species outlived male species. The lifespan of *X. nuttalli* was much shorter than that of *X. skrjabini*; 50% of the latter species survived at low temperatures (8-17°C) for 6-7 months (some individuals survived for more than a year). At a temperature of 20-24°C, they survived for 1.5 to 2 months (some individuals, up to 6 months). Regularly fed fleas of the *X. nuttalli* species, on the other hand, survived temperatures of 8-17°C for only 3.5-5 months (some individuals, 8 months) and temperatures of 20-24°C for up to 1 month (some individuals, more than 6 months).

1/1

1/2 025 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--THE VM-1 VACUUM DIFFRACTION MONOCHROMATOR AND ITS OPERATIONAL
PERFORMANCE -U-
AUTHOR--(03)-GERASIMOVA, N.G., SNIGIREV, YU.A., TVERITINOV, M.P.
COUNTRY OF INFO--USSR
SOURCE--LENINGRAD, OPTIKO MEKHANICHESKAYA PROMYSHLENNOST', NO 1, 1970, PP
58-62
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--VACUUM, MONOCHROMATOR, SPECTRAL DISTRIBUTION, PHOTOMETRIC
ANALYSIS, SPECTROMETER/(U)VM1 MONOCHROMATOR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1354 STEP NO--UR/0237/70/000/001/0058/0062
CIRC ACCESSION NO--AP0123312
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0123312

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS ARE GIVEN OF A STUDY OF THE SPECTRAL CHARACTERISTICS AND OPERATIONAL PERFORMANCE OF THE VM-1 SERIES PRODUCED VACUUM MONOCHROMATOR. IN CONJUNCTION WITH A PHOTOMETRIC CHAMBER, THE UNIT PERFORMS THE FUNCTIONS OF A SINGLE BEAM SPECTROMETER USED TO MEASURE THE TRANSMISSION AND REFLECTIVITY FACTORS OF SOME MATERIALS.

UNCLASSIFIED

1/2 035 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--FILTERING SUPERIMPOSED SPECTRA OF VARIOUS ORDERS IN DIFFRACTION
INSTRUMENTS USED IN THE VACUUM ULTRAVIOLET SPECTRAL REGION -U-
AUTHOR--GERASIMOVA, N.G.

COUNTRY OF INFO--USSR

SOURCE--OPT.-MEKH. PROM. 1970, 37(3), 58-65

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--VACUUM UV IRRADIATION, OPTIC FILTER, LIGHT TRANSMISSION,
SPECTRAL DISTRIBUTION, BAND SPECTRUM, IMAGE CONTRAST, MECHANICAL
STRENGTH, RELIABILITY, TEMPERATURE EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO-----FD70/605007/E01 STEP NO--UR/9237/70/037/003/0058/0065

CIRC ACCESSION NO--AP0139895

UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139895

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW WITH 60 REFS. VARIOUS TYPES OF FILTERS (GAS, FILM, SOLID, INTERFERENCE, AND REFLEX FILTERS) AND THEIR PROPERTIES (TRANSMISSION COEFFS., SPECTRAL BAND WIDTHS, CONTRAST, MECH. STRENGTH, RELIABILITY, AND OPERATING COMFORT) ARE DISCUSSED IN DETAIL. THE INFLUENCE OF THE OPERATING CONDITIONS (UV RADIATION, SPECTRAL RANGE, PRECONDITIONING, AND TEMP.) ON THE SPECTRAL CHARACTERISTICS OF THE FILTERS IS GIVEN IN THE FORM OF DIAGRAMS. THE OPTIMUM OPTICAL SCHEMES AND OPERATING CONDITIONS ARE PRESENTED.

UNCLASSIFIED

USSR

UDC 547.26'118

GERASIMOVA, S. S., BAKHITOV, M. I., and KUZNETSOV, YE. V.

"Addition of Dialkylphosphorous Acids to 3,5-Dibromo-2,4-toluylene Diisocyanate and 2,4,6-Trichloro-1,3-phenylene Diisocyanate"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 5, May 73, pp 1027-1028

Abstract: Dialkylphosphorous acids react easily with 3,5-dibromo-2,4-toluylene diisocyanate and 2,4,6-trichloro-1,3-phenylene diisocyanate in benzene or petroleum ether, triethylamine serving as a catalyst. The products are viscous liquids which crystallize on standing.

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USSR

UDC: 621.382.323

NARYSHKIN, A. K. and GERASIMOVA, T. I.

"Experimental Investigation of Noise in MOS Transistors"

Moscow, Radiotekhnika, No 10, 1972, pp 94-96

Abstract: This brief communication presents the noise characteristics of MOS field-effect transistors with p-type channels in the frequency range of 150 kHz to 5MHz at temperatures of -50 to +60° C. The circuit of the experimental equipment, in which the noise voltage level was measured by a selective microvoltmeter, type V6-I, is reproduced. Curves are obtained for the spectral density of the drain current noise as a function of the frequency at 20° C for two values of gate voltage, from which it is seen that there is a good deal of noise at the low frequencies and that this noise is an order higher than the thermal noise of the channel. The authors conclude that these transistors are characterized by high qualitative and quantitative noise-characteristic variations among individual specimens.

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USSR

UDC 77

MAKAROV, N. V., ~~GERASIMOVA, T. N.~~, CHURAYEVA, A. M., BABINA, Z. N.

"Effect of Potassium Iodide on the Dispersion of a Photographic Emulsion and the Solubility of Silver Halide"

V sb. Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Priroda fotogr. chuvstvitel'nosti (International Congress on Photographic Science, Moscow, 1970, Nature of Photographic Sensitivity -- Collection of Works), no place of publication given, Vneshtorgizdat, no year given, pp 309-312 (from RZh-Fizika, No 12(I), Dec 70, Abstract No 12D1345)

Translation: It is shown that the average area of the projection of AgBr(I) crystals of a photoemulsion of the ammonia type changes with an increase in the concentration of KBr similar to the change in the solubility of AgHal in the presence of I^- and NH_3 ions; a study of solubility therefore makes it possible to establish the change in dispersion of the emulsions. The solubility

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USSR

MAKAROV, N. V., et al, Mezhdunar. kongress po fotogr. nauke, Moskva, 1970,

... and ... no year given, pp 309-312

curve of AgHal has a maximum, the shape, height, and position of which depend on the KI concentration, so that at the maximum the ratio of Br^- and I^- ion concentration is close to the ratio of the solubility products of AgBr and AgI . The formation of silver iodide complexes (Ag_3I^{2+} , AgI_2^- , $\text{Ag}_2\text{I}_4^{2-}$, etc.) effecting the solubility of AgHal in the presence of ammonia occurs only for a KI concentration above 0.1 mol/l, i.e., in the range of concentrations not applicable in the synthesis of emulsions. A. L. Kartuzhanskiy.

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Acc. Nr. 0053777 Abstracting Service:
CHEMICAL ABST.Ref. Code
UR0366

110954h (Polyfluoroaryl)methanes and their derivatives. V.
Reaction of tris(polyfluoroaryl)methanols with sodium methylate.
Lubenets, E. G.; Gerasimova, T. N.; Furov, V. V.; Barkhash,
V. A. (Novosibirsk. Inst. Org. Khim., Novosibirsk, USSR).
Zh. Org. Khim. 1976, 6(2), 365-8 (Russ). The reaction of
MeONa with $\text{Ph}_2\text{C}(\text{OH})\text{C}_6\text{F}_5$ in MeOH at 20-50° gave $\text{C}_6\text{F}_5\text{H}$
(I), Ph_2CO , and 2,3,5,6-tetrafluoroanisole. Similarly, $(\text{C}_6\text{F}_5)_2\text{C}$
 $(\text{OH})\text{Ph}$ or PhCOC_6F_5 reacted with MeONa to give PhCO -
 $\text{C}_6\text{F}_5\text{OMe}$ -4, I, and PhCO_2Me . $(\text{C}_6\text{F}_5)_3\text{COH}$ or $(\text{C}_6\text{F}_5)_2\text{CO}$
reacted with MeONa to give a mixt. of 2,4-(MeO) $_2\text{C}_6\text{F}_3\text{COC}_6\text{F}_5$ -
OMe-4, [2,4-(MeO) $_2\text{C}_6\text{F}_3$] $_2\text{CO}$, 4-MeOC $_6\text{F}_4\text{CO}_2\text{Me}$, and 2,4-
(MeO) $_2\text{C}_6\text{F}_3\text{CO}_2\text{Me}$. CPJR

REEL/FRAME
19830840

1/2 012 UNCLASSIFIED PROCESSING DATE--02GCT70
TITLE--STABILITY OF SILVER COMPOUNDS WITH SOME MERCAPTO ACIDS -U-
AUTHOR--(02)-GERASIMOVA, T.N., BROMBERG, A.V.
COUNTRY OF INFO--USSR *G*
SOURCE--ZH. NAUCH. PRIKL. FOTOGR. KINEMATOGR. 1970, 15(1), 9-15
DATE PUBLISHED-----70
SUBJECT AREAS--METHODS AND EQUIPMENT, CHEMISTRY
TOPIC TAGS--CHEMICAL STABILITY, SILVER COMPOUND, ORGANIC ACID,
PHOTOGRAPHIC CHEMISTRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FNAME--1992/1603 STEP NO--UR/0077/70/015/001/0009/0015
CIRC ACCESSION NO--AP0112597
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112597

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. VALUES OF THE STABILITY CONSTS. OF MERCAPTO SILVER (I) COMPS. (DERIVED AND DETD. EXPTL.) INCREASED APPRECIABLY WITH INCREASING PH AT LOW PH VALUES, REMAINING SUBSTANTIALLY UNCHANGED AT HIGH PH. COMPARISON OF APPARENT STABILITY CONST. VALUES GAVE THE FOLLOWING ORDER OF DECREASING STABILITY OF I COMPS. INVESTIGATED: UNITHIOL MUCH LARGER THAN THIOLGLYCOLIC ACID APPROXIMATELY EQUAL TO CYSTEINE LARGER THAN THIOSALICYCLIC ACID MERCAPTOSUCCINIC ACID LARGER THAN P MERCAPTOBENZOIC ACID. THE STABILITY OF THE I COMPS. IN SOLNS. WAS ALSO EVALUATED, BOTH WITHOUT AND WITH THE STD. METOLHYDROQUINONE DEVELOPER UP-2. IN CONTROL SOLNS. CONTG. NO DEVELOPER, THE I COMPS. DISSOC., FORMING A BLACK SEDIMENT. IN SOLNS. WITH DEVELOPER A RED COLORATION WAS OBSD. WHICH INCREASED WITH TIME. IN THE ALIPHATIC THIOL SERIES, THE REDN. OF AG IONS DECREASED WITH INCREASING STABILITY CONST. OF THE I COMPS. IN THE FIRST APPROXN., THE STABILITY CONST. MAY BE OF PRACTICAL IMPORTANCE IN THE FIXING STEP. FACILITY: VSES. NAUCH.-ISSLED. INST. KHIM.-FOTOG. PROM., MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr.

AP0041533

Abstracting Service:

CHEMICAL ABST.

4/70

Ref. Code

UR0366

89960v Reaction of polyfluoro-substituted aromatic ketones with potassium cyanide. Vasilevskaya, T. N.; Badashkeeva, A. G.; Gerasimova, T. N.; Barkhash, V. A.; Vorozhtsov, N. N., Jr. (Novosibirsk. Inst. Org. Khim., Novosibirsk, USSR). *Zh. Org. Khim.* 1970, 6(1), 126-32 (Russ). The vigorous reaction of $(C_6F_5)_2CO$ with KCN in abs. EtOH at 20° gave C_6F_5H , 2,3,5,6- F_4C_6H (I), $C_6F_5CO_2Et$ (II), 2,3,5,6,4- $F_4(EtO)C_6CO_2Et$ (III), and 2,3,5,6,7- $F_4(EtO)C_6COC_6F_5$ (IV). The compds. were sepd. by gas chromatog. and identified by NMR. The reaction of II with EtONa gave III. Refluxing C_6F_5Br with EtONa in EtOH gave 2,3,5,6,4- $F_4(EtO)C_6Br$ (V) which was converted to its Grignard compd. and reacted with C_6F_5CHO to give 2,3,5,6,4- $F_4(EtO)C_6CH(OH)C_6F_5$, which on oxidn. with CrO_3 gave IV. The reaction of C_6F_5COPh with KCN in EtOH at 75° gave C_6F_5H , I, and 2,3,5,6,4- $F_4(EtO)C_6COPh$ (VI). Reacting V with Mg and PhCHO in abs. Et₂O gave 2,3,5,6,4- $F_4(EtO)C_6CH(OH)Ph$ which was oxidized to VI. The reaction of C_6F_5COMe with KCN in EtOH at 60-70° gave C_6F_5H , I, AcOEt, 2,3,5,6- $F_4C_6HC(NH)OEt$ (VII), 3,5,6,2- $F_3(EtO)C_6HCN$, and 2,3,5,6,4- $F_4(EtO)C_6COMe$ (VIII). Treating V with Mg and Ac₂O gave VIII. The treatment of VII with HCl in Et₂O gave 2,3,5,6- $F_4C_6HCONH_2$. CPJR

REEL / FRAME
19751401

1/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--TRANSCORTIN BINDING PROPERTIES AT HYPERTENSION IN THE GENEALOGICAL
ASPECT AND TWINS STUDIES -U-
AUTHOR-(04)-GERASIMOVA, YE.N., IGNATOVA, L.N., RYVKIN, I.A., RYABTSEVA,
S.V.
COUNTRY OF INFO--USSR
SOURCE--VOPROSY MEDITSINSKOY KHIMII, 1970, VOL 16, NR 3, PP 296-300
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--HYPERTENSION, HEREDITARY DISEASE, HUMAN GENETICS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0145 STEP NO--UR/0301/70/016/003/0296/0300
CIRC ACCESSION NO--AP0120845
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120845

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE BINDING PROPERTIES OF
TRANSCORTIN IN PATIENTS WITH HYPERTENSION ARE DECREASED. THE ANALOGOUS
PICTURE WAS SHOWN IN MEN WITH NORMAL BLOOD TENSION WHOSE PARENTS WERE
SUFFERED WITH HYPERTENSION. IN ONE EGG TWINS THE PRONOUNCED CONCORDANCE
IN THIS FEATURE WAS DEMONSTRATED. THIS CONCORDANCE WAS WELL CORRELATED
WITH THE ARTERIAL TENSION LEVEL. THE DATA PRESENTED POINT TO THE
INVOLVEMENT OF HEREDITARY FACTORS, REALIZING IN THE COURSE OF
HYPERTENSION DEVELOPMENT, IN THE DETERMINATION OF TRANSCORTIN BINDING
LEVEL. IT MAY BE SUPPOSED THAT THIS ONE OF THE POSSIBLE MECHANISMS OF
TRANSMISSION OF HEREDITARY PREDISPOSITION TO HYPERTENSION.
FACILITY: THE DEPARTMENT OF BIOCHEMISTRY I ST MEDICAL INSTITUTE AND A.
L. MYASNICOV CARDIOLOGY INSTITUTE USSR ACADEMY OF MEDICAL SCIENCES,
MOSCOW.

UNCLASSIFIED

1/1

USSR

GERASIMTSEVA, T. A., Verkh-Berezovskaya Hospital, Glubokovskiy Rayon,
Vostochno-Kazakhstanskaya Oblast

"Acute Myelitis Following Administration of Rabies Vaccine"

Alma-Ata, Zdravookhraneniye Kazakhstana, No 11, 1971, pp 74-75

Abstract: A brief case history is presented of a patient who was admitted to the hospital with symptoms of acute postvaccinal myelitis after having received preventive inoculations against rabies for 9 days. On the basis of the diagnosis, he was treated with prednisolone, ACTH, and gamma-globulin. After 2½ months, he was discharged with mild paresis and hyperesthesia in the feet; 5 years later, he is fully recovered.

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USSR

UDC 615.213

AKOPYAN, N. Ye., and GERASIMYAN, D. A.

"Anticonvulsive Properties of N-Methyl- α -Substituted Succinimides"

Yerevan, Biologicheskii Zhurnal Armenii, Vol 24, No 10, 1971, pp 88-90

Translation: We have shown earlier that α -substituted succinimides possess a definite anticonvulsive action with respect to convulsions caused by corazolol and electric shock. It is known from literature that the anticorazolol action of barbiturates and hydantoins increases when nitrogen is methylated at the third position. An identical effect was produced by alkylation and especially by methylation of imide nitrogen in the case of succinimide derivatives.

In this work we studied the anticonvulsive properties of 11 N-methyl- α -substituted succinimides which were synthesized at the ITOKh [Institute of Fine Organic Chemistry] of the Academy of Sciences Armenian SSR.

Experiments were carried out with white mice. Convulsions were produced by corazolol, electric shock (maximal), nicotine, and arecoline. All compounds were administered intraperitoneally as colloidal suspensions (because of their insolubility in water) 45 min before the administration of convulsants.

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USSR

AKOPYAN, N. Ye., and GERASIMYAN, D. A., Biologicheskii Zhurnal Armenii, Vol 24, No 10, 1971, pp 88-90

Elimination of the tonic extension phase in the case of electric shock and a complete prevention of convulsions in the case of corazolil served as indicators of the anticonvulsive properties of succinimides. All responses were recorded in an alternative fashion. Preparation dosages which prevented the development of convulsions in 50% of animals (ED₅₀) were calculated by the Litchfield and Wilcox method. In the case of convulsions produced by nicotine and arecoline, the effect of succinimides was evaluated on the basis of a three-point system.

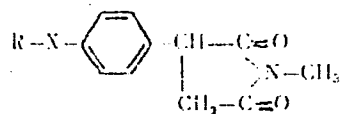
The experimental results showed that all compounds studied possess a distinctive anticonvulsive activity with respect to a maximal electric shock. The strongest anticonvulsive effect was shown by a compound with isoamyl radical at p-position. Anticonvulsive activity was observed mainly in compounds containing isoradicals (Table 1). As a group these compounds do not possess the antiarecoline properties. With respect to convulsions caused by nicotine, it can be said that compounds containing methyl, ethyl, and propyl radicals at p-position decrease the intensity of convulsions, and compounds containing isoradicals in the same position prevent them completely.

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USSR

AKOPYAN, N. Ye., and GERASIMYAN, D. A., Biologicheskiy Zhurnal Armenii, Vol 24, No 10, 1971, pp 88-90

Table 1
Anticonvulsive activity of compounds having the general formula



P=0.05

R	ED ₅₀ corazolol, mg/kg	ED ₅₀ , max. el. shock, mg/kg	MRD mg/kg	Nicotine-produced convulsions
CH ₃	inactive	239 (201-284)	1000	+
C ₂ H ₅	inactive	244 (206.4-287)	1300	+

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USSR

AKOPYAN, N. Ye., and GERASIMYAN, D. A., Biologicheskii Zhurnal Armenii, Vol 24,
No 10, 1971, pp 88-90

Table 1 (continued)

C_3H_7	inactive	230 (184-287)	1100	+
C_4H_9	inactive	inactive	1400	++
C_5H_{11}	inactive	inactive	1800	++
C_6H_{13}	220 (175-276)	160 (126-203)	2000	++
C_7H_{15}	inactive	inactive	2000	++
C_8H_{17}	inactive	inactive	2200	+++
iso- C_3H_7	186 (149-232.5)	160 (130-197)	1600	0

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USSR

AKOPYAN, N. Ye., and GERASIMYAN, D. A., Biologicheskii Zhurnal Armenii, Vol 24, No 10, 1971, pp 88-90

Table 1 (continued)

iso-C ₄ H ₉	240 (179-321)	180 (112.5-288)	1500	+
iso-C ₅ H ₁₁	208 (163-266)	82 (51.2-131.2)	1700	0

0 - absence of convulsions; +, ++, +++ - weak, average, and severe convulsions, respectively.

Thus, the N-methyl- α -substituted succinimides possess a weak anticorazolol activity and are more active in the case of a maximal electric shock. Our results did not verify the findings of G. Chen and coauthors stating that the N-methylation of succinimide derivatives increases their anticorazolol activity.

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1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ENERGY OF THE FIRST STOKES COMPONENTS IN THE STIMULATED RAMAN
SPECTRA OF SOME LIQUIDS -U-
AUTHOR-(04)-SHVEDOVA, N.D., GERASIN, A.P., SIVOLOBOV, V.V., SVERDLOV, L.M.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. SPEKTROSK. 1970, 12(2), 270-3
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--RAMAN SPECTRUM, PULSE EXCITATION, BENZENE, CYCLOHEXANE,
ACETYLENE HYDROCARBON, EXCITATION ENERGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/1237 STEP NO--UR/0368/70/012/002/0270/0273
CIRC ACCESSION NO--AP0116699
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 027

CIRC ACCESSION NO--AP0116699

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECTS OF THE ENERGY OF THE EXCITING PULSE AND CELL WIDTH ON THE ENERGY OF THE FIRST STOKES COMPONENTS OF THE STIMULATED RAMAN SPECTRA OF BENZENE (I) (992CM PRIME NEGATIVE), CYCLOHEXANE (II) (2846 CM PRIME NEGATIVE), AND PHENYLACETYLENE (III) (1002 AND 2102 CM PRIME NEGATIVE) WERE EXAMD. THE DATA SHOW THAT, AT LOW VALUES OF THE ENERGY OF EXCITING LIGHT, THE ENERGY OF THE FIRST STOKES COMPONENTS INCREASES MONOTONICALLY. THE RAMAN SPECTRA THRESHOLD DETD. FROM EXPTL. DATA WAS P EQUALS 1.5 FOR III AND 2.5 FOR II RELATIVE TO I. AN INCREASE OF CELL WIDTH CAUSED A DECREASE OF THE STIMULATED RAMAN SPECTRA THRESHOLD. THE ENERGY OF THE FIRST STOKES COMPONENTS INCREASED MONOTONICALLY WITH THE ENERGY PULSE INCREASE FOR CELLS OF 10, 20, 40, AND 80 MM WIDTH. FOR CELLS OF 350 MM WIDTH THIS INCREASE CEASED AT HIGHER ENERGIES OF EXCITATION. IN THIS CASE (WITH 350 MM CELL) THE ENERGY OF THE SECOND STOKES COMPONENT INCREASED SIGNIFICANTLY REACHING A HIGHER VALUE THAN FOR THE FIRST ONE.

UNCLASSIFIED

USSR

UDC 536.621-536.63

CHEKHOVSKOY, V. Ya., GERASINA, G. Z.

"True Heat Capacity of Copper and Type 1Kh18N9T Steel in the 300-900°K Temperature Interval"

Teplofizika Vysokikh Temperatur, Vol 9, No 5, 1971, pp 938-942.

Abstract: An experimental installation is described with automatic maintenance of the adiabatic mode. Data are produced on the true heat capacity of copper (99.99%) and Type 1Kh18N9T stainless steel in the 300-900°K temperature interval. An empirical equation is calculated for the heat capacity of copper in the 300-900°K interval. Experimental and literature data are compared.

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Microbiology

USSR

UDC 576.858.6.083.35.07

(11)

ZHDANOV, V. M., BYKOVSKIY, A. F., AL'TSHEYN, A. D., LOZINSKIY, T. F.,
URYVAYEV, L. V., VOLKOVA, M. L., YERSHOV, F. I., IL'IN, K. V., BEKTEMIROV,
T. A., IRLIN, I. S., MILLER, G. G., ZAKHAROVA, L. G., PEREKREST, V. V.,
GERASINA, S. F., and SEVAST'YANOVA, M. V., Institute of Virology imeni
D. I. Ivanovskiy, Academy of Medical Sciences USSR, and the Institute of
Epidemiology and Microbiology imeni N. F. Gamaleya, Moscow

"Detection of Oncornaviruses in Continuous Tissue Cultures"

Moscow, Voprosy Virusologii, No 4, 1973, pp 411-414

Abstract: Studies were conducted on a number of human and animal continuous tissue cultures maintained in medium 199 containing 10% bovine serum to determine oncornaviruses. Formation of oncornaviruses in the tissue cultures were followed by the appearance of viral particles in the culture fluid labeled with H^3 -uridine, susceptibility of their synthesis to low actinomycin D concentrations, appearance of these particles following inhibition of nuclear material synthesis by bromodeoxyuridine or mitomycin, presence of reverse transcriptase in these particles, presence of 60-70 S RNA in these particles, and electron microscopy. Of the 26 human lines investigated 14 contained type B oncornavirus, and 4 lines type C virus. Eight of the

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USSR

ZHDANOV, V. M., et al., Voprosy Virusologii, No 4, 1973, pp 411-414

14 animal lines studies also showed the presence of oncornaviruses. The source of these viruses in the human lines remains unclear, but the source may have been bovine serum or porcine trypsin used in the preparation of cell suspension. It is noteworthy that type B viruses were isolated in human cultures of epithelial origin, while type C viruses in human cultures of leukotic or sarcomatous origin.

2/2

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USSR

BYAKHUSANO, T. V., CHALIKHIN, V. M., and CHABIR, B. G., Kiev State University named N. S. Shvachko, Kiev, Ministry of Higher and Secondary Specialized Education Ukrainian SSR

"Titanium Extraction by a Chloroform Solution of Dimethylphosphate (DMSP)"

Kiev, Khimicheskyy Zhurnal, Vol. 15, No. 3, Aug. 79, pp. 40-41.

Abstract: The authors investigated the extraction of titanium and zirconium by a chloroform solution of dimethylphosphate (DMSP). The extraction process was studied in relation to the pH of the solution and the amount of DMSP. Titanium extraction was observed at pH 1. The extraction of zirconium, on the other hand, was observed at pH 2. The extraction of titanium and zirconium by DMSP was found to be dependent on the concentration of titanium and zirconium in the solution. It was found that the dimethylphosphate extractant complexed titanium and zirconium as hydrogen peroxide to yield a colored peroxide complex with a molar ratio of 1:1. The molar coefficients of absorption were determined at $\lambda = 395$ nm. A photometric extraction method was developed for the determination of titanium in the form of the complex $(TiO)_2 \cdot 2DMSP$.

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USSR

GERAS'KIN, A.

"Anti-Viper, Anti-Kufi, and Others"

Tashkent, Pravda Vostoka, 2 Apr 72, p 3

Abstract: A history is presented of the gradual perfection of antivenom at the Tashkent Scientific Research Institute of Vaccines and Sera. Research began in the 1930's; by 1968, a highly active anti-kufi serum was developed which was also effective for adder bites. This was followed by a new anti-viper serum. New purification and concentration methods reduce ballast proteins and minimize reactivity of the final product. Further research into the possibilities of producing dry sera has resulted in the formulation of three series of dry, quickly dissolving sera which are now being tested. Additional research is being done to produce nonreactive anti-pertussis and anti-diphtheria vaccines. The overall goal is to produce ideal highly active, nonreactive chemical vaccines.

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1/2 023 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--GLUCOCORTICOID FUNCTION OF THE ADRENAL CORTEX IN PREMATURE CHILDREN
SUFFERING FROM SEPSIS -U-
AUTHOR-(03)-GERASKINA, V.P., LEBEDEV, V.P., BOTVINYEV, O.B.
COUNTRY OF INFO--USSR
SOURCE--VOP OKHR MATERIN DET 15(1): 23-27. 1970
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ADRENAL CORTEX, POISON EFFECT, BLOOD PLASMA, HYDROCORTISONE,
CORTICOSTEROID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3009/0168

STEP NO--UR/0608/70/015/001/0023/0027

CIRC ACCESSION NO--AP0139031

UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139031

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FLUOROMETRIC METHOD OF TOTAL DETERMINATION OF 11-OCS (11, OXYCORTICOSTEROIDS) IN THE BLOOD PLASMA AND THE METHOD OF SEPARATE DETERMINATION OF HYDROCORTISONE AND CORTICOSTERONE BY COLUMN CHROMATOGRAPHY ON SILICAGEL WAS USED. IN SEPSIS OF PREMATURE CHILDREN THERE WAS A SINGLE TYPE OF REACTION EXHAUSTION OF ADRENAL CORTEX, CHARACTERIZED BY A LOW PRODUCTION OF HYDROCORTISONE AND CORTICOSTERONE. RESTORATION OF THE ADRENAL CORTEX FUNCTION WAS EXPRESSED IN INCREASED GLUCOCORTICOSTEROID PRODUCTION. SEVERE SEPSIS WAS ACCOMPANIED BY COMPLETE EXHAUSTION OF THE CORTEX AND A MARKED REDUCTION OF THE 11-OCS LEVEL. FACILITY: DEP. HOSP. PEDIAT., N. I. PIROGOV 2ND MOSCOW MED. INST., MOSCOW, USSR.

UNCLASSIFIED

1/3 022 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--STATE OF PERIPHERAL BLOOD CIRCULATION IN PERSONS BEING FOR A LONG
TIME IN AN OPEN TYPE SUBMARINE LABORATORY, HABITAT -U-
AUTHOR-(04)-AKHLAMOV, YE.A., GULYAR, S.O., GERASYUTENKO, YE.I., KHAES,
O.A.
COUNTRY OF INFO--USSR
SOURCE--FIZIOLOGICHNYY ZHURNAL, AKADEMIYA NAUK UKRAINS'KOI RSR, 1970, VOL
16, NR 1, PP 115-120
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD CIRCULATION, PERIPHERAL CIRCULATION, AQUANAUT,
UNDERWATER RESEARCH LABORATORY, ATMOSPHERIC HUMIDITY, ATMOSPHERIC
TEMPERATURE/(U)IKHTIANDR UNDERWATER LABORATORY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/1369

STEP NO--UR/0238/70/016/001/0115/0120

CIRC ACCESSION NO--AP0136728

UNCLASSIFIED

2/3 022

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136728

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PERIPHERAL BLOOD CIRCULATION OF EIGHT AQUANAUTS WHO SPENT SEVEN DAYS IN AN OPEN TYPE SUBMARINE LABORATORY WAS STUDIED TO DETERMINE THE ADAPTIVE STRESSES OF A PERSON SUBJECTED FOR A PROLONGED TIME TO UNUSUAL CONDITIONS WITHOUT PREVENTIVE PREPARATION FOR SUCH CONDITIONS. THESE AQUANAUTS PARTICIPATED IN IKHTIANDR-67 BLACK SEA EXPEDITION IN AUGUST-SEPTEMBER, 1967. THE LABORATORY, A SPECIALLY DESIGNED FOUR CHAMBER VESSEL HAVING VOLUME OF 28 M³ WITH FORCED VENTILATION, WAS SUBMERGED TO 14 M DEPTH. IT WAS EQUIPPED FOR CONTINUOUS LIVING UNDER WATER. ATMOSPHERIC PRESSURE OF 2.2 ATM, TEMPERATURE OF 23 TO 31 C AND HUMIDITY OF 93PERCENT WERE CONTINUOUSLY MAINTAINED. ONLY HEALTHY INDIVIDUALS, 24 TO 42 YEARS OLD WERE SELECTED FOR INVESTIGATION. TWICE A DAY THEY WALKED FOR 30 MIN AT A DEPTH OF OVER 14 M AND ONCE A DAY PERFORMED PHYSICAL WORK FOR 20 MIN. WATER TEMPERATURE VARIED FROM 20 TO 23 C BUT AQUANAUTS WERE WARMLY DRESSED. PERIPHERAL BLOOD CIRCULATION WAS MEASURED BEFORE SUBMERGING AND ON THE SURFACE AFTER BEING UNDER WATER FOR ONE, TWO, THREE, FOUR, AND FIVE DAYS. IN ADDITION TO BLOOD CIRCULATION AND PULSE, SKIN TEMPERATURE IN THE MOUTH AND AT VARIOUS POINTS OF THE BODY AND LIMBS WERE MEASURED. MEASURING TECHNIQUES AND INSTRUMENTATION ARE DESCRIBED IN DETAIL AND DATA OBTAINED ARE PRESENTED IN TABULAR FORM.

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136728

ABSTRACT/EXTRACT--AS A RESULT OF THE DESCRIBED INVESTIGATION THE FOLLOWING PRELIMINARY CONCLUSIONS WERE MADE: FROM AMONG MANY FACTORS AFFECTING A HUMAN BEING SUBJECTED TO PROLONGED STAYING UNDERWATER MOST IMPORTANT FOR BLOOD CIRCULATION ARE HIGH HUMIDITY AND AIR TEMPERATURE, AND CONTINUOUS INHALING OF SUBTOXIC CONCENTRATIONS OF OXYGEN; AFTER BEING IN A SUBMARINE LABORATORY FOR THREE TO FOUR DAYS AN ADAPTATION OF THE ORGANISM TAKES PLACE; WHEN PERFORMING UNDERWATER WORK IN A LIGHT AQUANAUT SUIT MUCH ATTENTION SHOULD BE PAID TO PROTECTING THE AQUANAUT FROM COLD; AND IN DESIGNING OPEN TYPE UNDERWATER BASE, MEANS SHOULD BE PROVIDED FOR KEEPING AQUANAUTS WARM. FACILITY: KAFEDRA KHVOROB VUKHA, GORLA, NOSA DONETS'KOGO MEDYCHNOGO INSTYTUTU; MEDYCHNYVYDIL VNDI GIRNYCHORYATUVAL'NOY SPRAVY.

UNCLASSIFIED.

USSR

UDC 620.193.4:669.29

BRYNZA, A. P., GERASYUTINA, L. I., BAYBAROVA, YE. YA., Dnepropetrovsk State University

"Corrosion Behavior of Titanium in Dimethylformamide"

Moscow, Zashchita Metallov, Vol 8, No 6, 1972, pp 705-707

Abstract: A theoretical and experimental study was made of the corrosion and electrochemical behavior of titanium in solutions of dimethylformamide. The corrosion tests were performed by the gravimetric method [A. P. Brynza, et al., Zh. prikl. khimii, No 35, 683, 1962], and the electrochemical tests were made by the method of taking the polarization curves under potentiodynamic conditions [L. I. Gerasyutina, et al., Zh. prikl. khimii, No 36, 2005, 1963] with a mean rate of variation of the potential of three volts/hour in the temperature range of 40, 60, 70, and 80°. The gravimetric tests lasted 3 hours.

For all the investigated temperatures, titanium did not dissolve noticeably in dimethylformamide. Solutions of H_2SO_4 in dimethylformamide were aggressive. The corrosion rate V as a function of the temperature in a 4 normal solution of H_2SO_4 in dimethylformamide is subject to the Arrhenius equation, and in the $\lg V -- 1/T$ coordinates it has a rectilinear nature. The effective $1/2$

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BRYNZA, A. P., et al, Zashchita Metallov, Vol 8, No 6, 1972, pp 705-707

activation energy for the titanium corrosion process found from the experimental curve is 18.2 kcal/mole which indicates the electrochemical control of the process. Paranitroaniline (to 40 grams/liter), katapine A (to 10 grams/liter), and utropine (to 2 grams/liter) were tested as titanium corrosion inhibitors in 4 normal H_2SO_4 in dimethylformamide, but only urotropine was effective. Addition of 0.5% water to the electrolyte has little effect on the process of active solution of titanium, but addition of 1% water changes the nature of the polarization curve. The data indicate that the solution of the titanium in the active state takes place with the participation of water molecules. Passivation of the titanium in acid solutions is the result of interaction of the metal with the water molecules. The urotropine increases the cathode and anode polarization of the titanium, that is, it is a mixed inhibitor with predominant effect on the anode process.

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- 15 -

USSR

UDC: 66 - 620.193

BRYNZA, A.P., GERASYUTINA, I.I., and FEDASH, V.P., Dnepropetrovsk State University
imeni 300th Anniversary of the Union of Russia and the Ukrain, Dnepropetrovsk,
Ministry of Higher and Secondary Specialized Education Ukrainian SSR

"Protective Action of Katapine A in Titanium Corrosion in Hydrochloric Acid"

Kiev, Ukrainskiy Khimicheskii Zhurnal, Vol 36, No 4, Apr 70,
pp 397-400

Abstract: The authors studied the effect of Katapine A (alkylbenzyl-
pyridinium chloride), an inhibitor of the corrosion of titanium, in
5 and 10 N HCl solution at 20-80°. By chemisorption on the surface
of titanium, Katapine A slows down the rate of electrochemical reac-
tion of the corrosive process. Appearance of the chemisorption layer
aids in the inhibition of the corrosion of the metal surface by
adsorptive-chemical reaction with water oxygen.

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1/2 019

UNCLASSIFIED

PROCESSING DATE--04DEC70

TITLE--ANOMALOUS MAGNETIC BEHAVIOR OF IRON, III, CHELATES WITH
THIOSEMICARBAZONES OF SALICYLALDEHYDE AND PYRORACEMIC AICD -U-
AUTHOR-(04)-IVANOV, E.V., ZELENTSOV, V.V., GERBELEU, N.V., ABLOV, A.V.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(4), 827-30

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IRON COMPOUND, CHELATE COMPOUND, MAGNETIC PROPERTY, AMMONIUM
COMPOUND, ELECTRON ENERGY LEVEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0222

STEP NO--UR/0020/70/191/004/0827/0830

CIRC ACCESSION NO--AT0132494

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132494

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MAGNETIC BEHAVIOR WAS STUDIED FOR THE CHELATES OF $Fe(III)$ WITH THE THIOSEMICARBAZONE OF SALICYLALDEHYDE (H SUB2 THSA) AND OF PYRORACEMIC ACID (H SUB2 THPU). THE CHELATES NH SUB4($Fe(THSA)$ SUB2) AND NH SUB4($Fe(THPU)$ SUB2) WERE STUDIED AT 80-393DEGREESK, AND THEY WERE FOUND TO HAVE A LOW SPIN. HOWEVER, THE MIXED COMPLEX NH SUB4($Fe(THSA)(THPU)$).1.5H SUB2 O EXHIBITED ANOMALOUS MAGNETIC BEHAVIOR. THIS IS EXPLAINED BY THE THERMAL EQUIL. BETWEEN THE GROUND AND 1ST EXCITED ELECTRON LEVELS. THE LIMITING, LOW TEMP. VALUE OF μ SUB3FF DOES NOT REACH THE LOW SPIN VALUE. FACILITY: MOSK. FIZ.-TEKH. INST., MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr.

AP 0034214

Abstracting Service:
CHEMICAL ABST. 4-70

Ref. Code

UR 0078

G

74198d Complexes of cobalt and nickel with pyruvic acid thiosemicarbazone. Ablov, A. V.; Gerbeleu, N. V.; Negryatse, N. Ya.; Revenko, M. D. (USSR). Zh. Neorg. Khim. 1970, 15(1), 123-7 (Russ). Dark-brown cryst. $\text{NH}_4[\text{CoL}_2] \cdot \text{H}_2\text{O}$ (I) formed on oxidn. of a mixt. of NH_4OH soln. of pyruvic acid thiosemicarbazone (H_2L) and a Co(II) salt. Reaction of I with HCl gave $[\text{Co}(\text{HL})(\text{L})] \cdot 1/2\text{H}_2\text{O}$ and $[\text{Co}(\text{HL})_2] \cdot 1.3.5\text{H}_2\text{O}$ and with $\text{MCl}_2 \cdot n\text{H}_2\text{O}$ gave $\text{M}[\text{CoL}_2]_2 \cdot n\text{H}_2\text{O}$ where $\text{M} = \text{Cu}$ or Mn . Light-green cryst. $[\text{Ni}(\text{HL})_2] \cdot \text{H}_2\text{O}$ was prepd. analogously to I. When $\text{C}_5\text{H}_5\text{N}$ (py) or α -methylpyridine (α -Me-py) were added to the reaction mixt., the product was $\text{NiL}(\text{py})$ or $\text{NiL}(\alpha\text{-Me-py})$, resp. Complexes of Ni or Co contg. neutral H_2L failed to form. HMJR -

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REEL/FRAME

19710867

di

GERBELEU N.V.

Acc. Nr: **AF0041519** - Abstracting Service:
- CHEMICAL ABST.

Ref. Code:

4-70
4R0078

85754h Complexes of nickel with diacetyl selenosemicarbazone oxime: Ablov, A. V.; Gerbeleu, N. V.; Negryatse, N. Ya. (Inst. Khim., Kishinev, USSR). *Zh. Neorg. Khim.* 1970, 15(1), 119-22 (Russ). Mixing of a Ni salt soln. with a MeOH soln. of diacetyl selenosemicarbazone oxime (H_2dseo) gave $[Ni(H_2dseo)_2]X_2$ (I), where $X = Cl, Br, I, \text{ or } NO_3$. I are paramagnetic ($\mu_{eff} \sim 3 \mu_B$) and are, therefore, octahedral in structure. When an NH_4OH soln. of H_2dseo was used, the reaction gave $Ni(dseo)(NH_3)_2 \cdot H_2O$. Addn. of $PhNH_2$ to the MeOH soln. of H_2dseo gave $Ni(dseo)(PhNH_2)_2$. The last 2 complexes are diamagnetic.

HMJR

REEL/FRAME
19751387

USSR

UDC: 621.317.411.023

GERBER, A. A., KUGAYEVSKIY, A. F.

"Measurement of Reversible Permeability on High Frequencies"

Tr. Sib. NII metrol. (Works of the Siberian Scientific Research Institute of Metrology), 1971, vyp. 12, pp 53-60 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6A302)

Translation: A description is given of a two-circuit permeameter and a coaxial resonator designed for high-frequency and superhigh-frequency measurements of the magnetic characteristics of materials under the effect of constant magnetic fields. Resumé.

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USSR

UDC: 621.317

MAMONOV, A. A., GERBER, A. A.

"Measuring the Parameters of Low Mutual-Inductance Coils on Frequencies up to 10 MHz"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 1 (Reports of the All-Union Scientific and Technical Conference on Radio Engineering Measurements. Vol. 1), Novosibirsk, 1970, pp 52-55 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A371)

Translation: The authors present two measurement circuits which were studied at the SNIIM [expansion unknown]. One of these circuits is designed for low and extremely low mutual inductances (10^{-10} - 10^{-3} H), while the other (a bridge resonance circuit) is for measuring mutual inductance ($3 \cdot 10^{-7}$ - 10^{-2} H) and the tangent of the inductance phase angle (10^{-4} - 10^{-1}). Formulas are given for determining the measured quantities, and errors are noted. Two illustrations, bibliography of three titles. E. L.

1/1

1/2 038 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EFFECTS OF FUNCTIONAL GROUPS OF VARYING CHEMICAL NATURE OF THE FILM
FORMING PROPERTIES OF ACRYLIC POLYMERS -U-
AUTHOR-(02)-GERBER, V.D., YELISEYEVA, V.I.

COUNTRY OF INFO--USSR

SOURCE--LAKOKRASOCH., MATER. IKH PRIMEN. 1970, (1), 4-6

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--ACRYLATE, PLASTIC FILM, ACRYAMIDE, ACRYLONITRILE, METHACRYLIC
ACID, POLYMERIZATION, MOISTURE MEASUREMENT, MAGNESIUM, METAL COATING,
METAL CORROSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/0688

STEP NO--UR/0303/70/000/001/0004/0006

CIRC ACCESSION NO--AP0119596

UNCLASSIFIED

2/2 038

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119596

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE COPOLYM. OF BU METHACRYLATE WITH METHACRYLAMIDE, METHYLOLMETHACRYLAMIDE (I), ACRYLONITRILE, GLYCIDYL METHACRYLATE (II), DIMETHYLAMINOETHYL METHACRYLATE (III), OR METHACRYLIC ACID (IV) IN MEGH-PHME MIXT. CONTG. BZ SUB2 O SUB2 OR AZOBISISOBUTYRONITRILE AT 70DEGREES GAVE POLYMERS WHICH HAD PRACTICALLY IDENTICAL MAIN CHAINS, BUT DIFFERENT SIDE GROUPS. ALL OF THE SIDE GROUPS EXCEPT CN INCREASED THE TENSILE STRENGTH AT BREAK OF THE POLYMER FILMS. MEO, AMIDE, CO SUB2 H, AND GLYCIDYL GROUPS INCREASED THE ADHESION OF THESE POLYMERS TO METALS. THE PRESENCE OF 5 MOLE PERCENT III IN THE POLYMER INCREASED MOISTURE ADSORPTION FROM THE AIR AT 93PERCENT RELATIVE HUMIDITY 60 FOLD (FROM 0.1 TO 6PERCENT); 5PERCENT I INCREASED MOISTURE ADSORPTION 1 FOLD. THE CORROSION OF MG COATED WITH THE POLYMERS DECREASED IN THE FOLLOWING SUBSTITUENT SERIES: II SMALLER THAN IV SMALLER THAN I SMALLER THAN III.

UNCLASSIFIED

USSR

UDC: 621.396.6:621.318

GERBERG, A. N., KARSANOVA, N. M.

"Calculating the Topography of the Magnetic Field in the Gap of Permanent Magnets With Conical Poles"

Elektron. tekhnika. Nauchno-tekhn. sb. Ferrit. tekhn. (Electronic Technology. Scientific and Technical Collection. Ferrite Technology), 1979, vyp. 2 (24), pp 70-76 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V676)

Translation: Permanent magnets with conical poles made from magnetically soft steels are used to produce a magnetic flux concentrated in a small volume (which is necessary for many different electronic devices). The authors have worked out a method which can be used to find the optimum relative dimensions of conical poles and the dimensions of the gap depending on the predetermined nature of the field between them. The problem is solved on the basis of potential theory. Curves are plotted which characterize field distribution: the dependence of field strength in the center on the dimensions of the gap, the dependence of the size of the uniform region of the field on the angle between the planes which form the pole, etc. Six illustrations, bibliography of four titles. N. S.

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UDC: 621.396.6:621,318

USSR

GERBERG, A. N., KARSANOVA, N. M.

"Calculating the Topography of the Magnetic Field in the Gap of Permanent Magnets With Conical Poles"

Elektron. tekhnika. Nauchno-tekhn. sb. Ferrit. tekhn. (Electronic Technology. Scientific and Technical Collection. Ferrite Technology), 1979, vyp. 2 (24), pp 70-76 (from Elektron. tekhnika, No 12, Dec 79, Abstract No 12V426)

Translation: Permanent magnets with conical poles made from magnetically soft steels are used to produce a magnetic flux concentrated in a small volume (which is necessary for many different electronic devices). The authors have worked out a method which can be used to find the optimum relative dimensions of conical poles and the dimensions of the gap depending on the predetermined nature of the field between them. The problem is solved on the basis of potential theory. Curves are plotted which characterize field distribution: the dependence of field strength in the center on the dimensions of the gap, the dependence of the size of the uniform region of the field on the angle between the planes which form the pole, etc. Six illustrations, bibliography of four titles. N. S.

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USSR

UDC: 621.396.6:621.318

GERBERG, A. N., LAVROSHCHUK, N. A., RABINOVICH, Ya. D.

"Digital Computer Analysis of Bar Type Permanent Magnets"

Elektron. tekhnika. Nauchno-tekhn. sb. Ferrit. tekhn. (Electronic Technology. Scientific and Technical Collection. Ferrite Technology), 1970, vyp. 2 (24), pp 59-69 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V425)

Translation: By using the equation for the demagnetization curve of a permanent magnet, the authors derive equations for analyzing bar magnet systems made from materials with nonlinear characteristics (cast anisotropic alloys). A method for digital computer solution of these equations is demonstrated. The computational errors are analyzed. Five illustrations, bibliography of eight titles. N. S.

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Acc. Nr:

AP0049122

Abstracting Service:
CHEMICAL ABST. 5/70

Ref. Code:

UR 0079

100195x Synthesis and thermal decomposition of dibutoxy-cumylperoxyboron in n-nonane. Maslennikov, V. P.; Gerbert, G. P.; Khodalev, G. F. (USSR). Zh. Obshch. Khim. 1970, 40(1), 245 (Russ). (BuO)₂BCl and NaO₂CMe₂Ph gave (BuO)₂BO₂CMe₂Ph, d₄²⁰ 0.975, n_D²⁰ 1.4707, which is hydrolyzed by moisture at extraordinary rate. Pyrolysis of it in nonane gave 75% PhMe₂COH, 20% AcPh, 20% CH₄, 96% esters of H₂BO₃, and 4.5% dinonyl. Hydrolysis of the mixt. gave nonyl alc. indicating the presence, in the decompn. products of borate esters, of the solvent radical component. Evidently in the attack of the peroxide by the nonyl radical a displacement occurs at the cumyloxy grouping. The reaction is free radical. G. M. Kosolapoff.

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REEL/FRAME
19800928

714

Acc. Nr:

AP0053427

Abstracting Service:

CHEMICAL ABST.

Ref. Code:

4R 0079

110597u Decomposition of tris(tert-butyl peroxy)boron to hydrocarbons. Gerbert, G. P.; Maslennikov, V. P.; Shushunov, V. A. (Nauch.-Issled. Inst. Khim., Gor'k. Gos. Univ. im. Lobachevskogo, Gorki, USSR). *Zh. Obshch. Khim.* 1970, 40(1), 131-5 (Russ). Kinetic data were presented for pyrolysis of $(\text{Me}_3\text{CO}_2)_3\text{B}$ (I) in nonane and in cumene in the 130-90° interval. The reaction products were H_3BO_3 , Me_3COH , CH_4 , and esters of H_3BO_3 . In cumene the latter esters were not formed, but they amounted to some 0.48 mole in nonane after pyrolysis at 160°. The product distribution was tabulated for the various temps.; while CH_4 was a minor product, Me_3COH was the main decomposition product. A reaction scheme was proposed. Addition of the principal reaction products to the mixture did not affect the rate of conversion of I but addition of $(\text{Me}_3\text{CO})_2$ did accelerate the reaction, as expected. The effective rate constant could be calculated for the overall reaction on the basis of 1st order kinetics. The activation energy for the reaction in nonane is 18.4 kcal/mole.

G. M. Kosolapoff

REEL/FRA
19830452

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1/2 009 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--MOLECULAR WEIGHT DISTRIBUTION AND FUNCTIONALITY OF OLIGOMERIC
POLYDIETHYLENE GLYCOL ADIPATES -U-
AUTHOR-(04)-YEVREINOV, V.V., GERBICH, V.I., SARYNINA, L.I., ENTELIS, S.G.
COUNTRY OF INFO--USSR
SOURCE--VYSOKOMOL. SOEDIN., SER. A 1970, 12(4), 829-35
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ETHYLENE GLYCOL, MOLECULARWEIGHT, CHROMATOGRAPHIC ANALYSIS,
HYDROXYL RADICAL, SILICA GEL/(U)ASK SILICA GEL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1263 STEP NO--UR/0459/70/012/004/0829/0835
CIRC ACCESSION NO--AP0134937
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134937

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OLIGOMERIC POLYDIETHYLENE GLYCOL ADIPATES) (I) (OF MOL. WT. 370-2240) WERE FRACTIONATED BY ELUTION CHROMATOG. (BY USING SILICA GEL ASK (II) AS A SOLID PHASE AND MECOET AS AN ELUENT). THE FRACTIONATION OF I DEPENDED PRIMARILY ON THE ADSORPTION INTERACTION OF TERMINAL OH GROUPS WITH II. THE PERCENTAGE OF I MOLS. CONTG. FEWER THAN 2 TERMINAL OH GROUPS AND THEIR MOL. WT. DISTRIBUTION WAS EVALUATED FROM THE DEVIATION OF THE MU SUBN PRIMEOH:MN RATIO FROM UNITY (MU SUBN IS THE NO. AV. MOL. WT. AND MU SUBN PRIMEOH IS THE MOL. WT. DETD. FROM THE NO. OF TERMINAL OH GROUPS). FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

UNCLASSIFIED

1/2 006 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--MANGANESE GREEN PIGMENT -U-
AUTHOR-(02)-~~GERBILSKIY~~, YE.I., LIVSHITS, I.M. 6
COUNTRY OF INFO--USSR
SOURCE--U.S.S.R. 264,571
REFERENCE--OTKRYTIYA, IZOBRET., PRGM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--03MAR70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--PIGMENT, PATENT, MANGANESE COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3002/1465 STEP NO--UR/0482/70/000/000/0000/0000
CIRC ACCESSION NO--AA0124864
UNCLASSIFIED

2/2 006


UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0128864

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MANGANESE GREEN PIGMENT IS PREPD. BY CALCINING A CHARGE CONSISTING OF AN MN CONTG. COMPO., AN OXIDANT, AND BASO SUB4, LEACHING IT WITH HCL, WASHING THE OBTAINED MELT, WASHING THE ISOLATED PIGMENT, AND CALCINING AGAIN AT 800-500DEGREES.

UNCLASSIFIED

1/2 034 UNCLASSIFIED PROCESSING DATE--02 OCT 70
TITLE--THE ANTARCTIC SPEAKS, GERSEVICH NOTES EXPANSION OF FACILITIES AT
ANTARCTIC STATIONS -U-
AUTHOR--GERSEVICH, V. 
COUNTRY OF INFO--USSR, ANTARCTICA
SOURCE--MOSCOW, VOENNY TRANSPORT, 30 APRIL 1970, P 4
DATE PUBLISHED--30 APR 70

SUBJECT AREAS--SPACE TECHNOLOGY, ATMOSPHERIC SCIENCES, EARTH SCIENCES AND
OCEANOGRAPHY
TOPIC TAGS--GEOGRAPHIC EXPEDITION, ANTARCTIC STATION, METEOROLOGIC DATA,
POLAR AREA, EXPLORATORY DRILLING, SIGNAL RECEPTION, WEATHER FORECAST,
METEOROLOGIC SATELLITE, ANTARCTIC CLIMATE/(U)MIRNY ANTARCTIC STATION,
(U)MOLODEZHNYA ANTARCTIC STATION, (U)VOSTOK ANTARCTIC STATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1989/1694

STEP NO--UR/9028/70/000/000/0004/0004

CIRC ACCESSION NO--AN0108071

UNCLASSIFIED

2/2 034

UNCLASSIFIED

PROCESSING DATE--020CT70

CIRC ACCESSION NO--AN0108071

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CANDIDATE OF GEOGRAPHICAL SCIENCES V. GERBOVICH, HEAD OF THE 220 MEMBER FIFTEENTH SOVIET ANTARCTIC EXPEDITION WHO RECENTLY ARRIVED IN THE ANTARCTIC, DESCRIBES SOME OF THE CHANGES THAT HAVE TAKEN PLACE AND THE PROGRAMS THAT ARE UNDERWAY AT THE VARIOUS SOVIET STATIONS. HE NOTES THAT HIS EXPEDITION WAS THE FIRST TO ATTEMPT THE SIMULTANEOUS RECEPTION OF WEATHER SATELLITE DATA AT MIRNYI OBSERVATORY AND MOLODEZHNYA STATION. THIS INFORMATION IS BEING USED TO COMPILE WEATHER FORECASTS AND REVIEWS OF ICE CONDITIONS IN THE SOUTH POLAR SEAS. THE WEATHER BUREAU AT MIRNYI IS NOW TRANSMITTING INFORMATION FOR USE BY SEVERAL FOREIGN COUNTRIES. GERBOVICH ADDS THAT INTERESTING INVESTIGATIONS ARE ALSO BEING CONDUCTED AT VOSTOK STATION, WHERE DEEP DRILLING APPARATUS HAS BEEN SET UP FOR CORE SAMPLING. HE NOTES THAT VOSTOK STATION HAS BEEN EXPANDED CONSIDERABLY. IN ADDITION TO THE DRILLING PLATFORM, THERE IS A NEW ELECTRIC POWER PLANT, AN AEROLOGICAL PAVILION, A MICROBIOLOGICAL LABORATORY, TWO NEW DWELLINGS AND A PROVISIONS STOREHOUSE. THE POLAR WORKERS ALSO HAVE A BUILDING FOR SPORTS ACTIVITIES.

UNCLASSIFIED

USSR

UDC 535.324+535.341]:539.238

USOSKIN, A. I., SHKLYAREVSKIY, I. N., GERCHIKOV, A. S., and VERLINSKIY, Yu. S

"The Optical Properties of Thin Films of Bismuth"

Leningrad, Optika i Spektroskopiya, Vol 34, No 5, May 73, pp 954 - 958

Abstract: Experimental studies were made of two groups of bismuth films. Films in the first group were precipitated in a vacuum at room temperature and then heated to 120°C, while those in the second group were deposited on a substrate heated to 120°C. Films in the first group were of a gray-blue color with transitions to yellowish at low thicknesses, while those in the second group were an intense yellow color. Each group includes films of different, precisely controlled thicknesses. The films deposited at room temperature could not be separated from the substrate, so they were deposited on materials that were transparent to the electron beam for electron microscopy. The two groups of films show a clear distinction in pattern, those in the second group maintaining large, distinct islands of bismuth even at high thicknesses, while the islands tend to run together in the first groups.

Visible light measurements were made to determine the indices of refraction and absorption of the films. Nominal values permitted the calculation of the imaginary and real components of the effective dielectric constant of the films.

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USSR

Usoskin, A. I., et al, Leningrad, Optika i Spektroskopiya, Vol 34. No 5, May 73, pp 954 - 958

These calculations yield both positive and negative roots. Special observations permitted the determination that the positive roots and the indices of refraction and absorption associated with them are valid for the thinner films, while the negative values are valid for thicker films. The transition comes when the two values of effective dielectric constant tend to be equal, that is when the expression under the radical in the formula for this value becomes zero; this thickness is greater for light of longer wavelengths.

The results indicate that as the islands of bismuth coalesce in films of the first group the properties approach those of much thicker films, while the films of the second group maintain fairly constant indices even when the thickness and the size of the islands change significantly (thickness 11 - 18 nanometers). The relevant values for various thicknesses and wavelengths are given in two tables.

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USSR

~~GERCHIKOV, YE.~~ Automation of Long-Distance

"Conference On Automation Of Intercity Telephone Communication"

Elektrosvyaz', No 6, June 1972, p 79

Abstract: The Ukrainian Republic Conference On Communication And Preparation For Creation Of Intrazone Networks In The Republic was held on 3-4 April 1972 at Zhitomir. The conference was attended by leading engineer-technical and operational personnel of the regions of the PTUS [expansion unknown], the long-distance offices and metropolitan telephone exchanges, management of communication and URM [expansion unknown] of the Ukraine, as well as representatives of the Ministry Of Communications, USSR, Ministries Of Communications of the Union Republics, TsNIIS [Central Scientific-Research Institute Of Communications], Giprosvyaz' [State Institute For The Surveying And Planning Of Communication Installations], The Moscow, Leningrad, and Odessa Electrical Engineering Institutes Of Communications, transit units and banks [ryad] of the URM [expansion unknown]. Five reports and eleven communications were presented at the conference. Brief summaries are given of a report by the Ministry Of Communications Of The UkrSSR, the Kiev MTC [Long-Distance Telephone Exchange], the Kiev OPTUS [expansion unknown], and personnel of TsNIIS.

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USSR

UDC 519.2

GERCHUK, YA. P.

"Graphs in Mathematical-Statistical Analysis"

Grafiki v matematiko-statisticheskoy analiz (cf. English above), Moscow, Statistika, 1972, 78 pp, ill., 25 k (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V123 K)

No abstract

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USSR

UDC 621.357.7:669.38

DYMARSKAYA, P. I., GERENROT, YU. YE., EYCHIS, A. P., Ukrainian Scientific-
Research Institute of Local Industry

"Study of Corrosion Resistance of Nickel and Copper-Nickel Coatings"

Moscow, Zashchita Metallov, No 4, 1972, pp 492-496.

Abstract: The authors studied the corrosion resistance of coating systems containing copper and nickel in order to estimate the effectiveness of a copper sublayer and possibility of using shiny nickel as the copper layer. The coatings were tested over steel under natural conditions for one year. It is concluded that a copper sublayer produced from ethylene diamine and tartrate electrolytes improves the protective properties of nickel coatings. At a thickness of 18 μ , the copper-nickel coatings are equal in corrosion resistance to binickel coatings. In spite of the greater electrochemical activity of shiny nickel coatings, they protect steel from corrosion better than matte polished coatings. Shiny nickel coatings cannot be used for outer surfaces of products used under atmospheric conditions, however. A thin layer of chromium does not improve the protection of steel from corrosion, but improves the durability of the decorative appearance of the coating.

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USSR

UDC 621.357.7

GERENROT, YU. YE., RABINOVICH, S. M., and MIKRINICH, N. A.

"Internal Stresses in Superthin Films of Electrolytic Copper"

Moscow, Zashchita Metallov, Vol 6, No 6, Nov-Dec 70, pp 713-716

Abstract: This article contains the results of a study of internal stresses of copper films 100-1,000 Å thick as a function of current density and composition of the sulfate electrolyte. The internal stresses were measured by the flexible cathode method using a specially designed, highly sensitive instrument. The experimental procedure is described, and the results are presented in the form of graphs and tables showing the cathode deflection as a function of deposition time and the scheme for adjustment of it considering the postelectrolysis phenomena, the internal stresses in copper coatings 1,000 Å thick as a function of current density in electrolytes made up of H_2SO_4 at 50 g/liter, $CuSO_4 \cdot 5H_2O$ at 50, 100, 5 and 200 g/liter, and $CS(NH_2)_2$ at 10^{-4} and 10^{-5} moles/liter.

It is noted that the unusually high stresses (100-130 kg/mm²) detected in thin copper films during low deposition rates greatly exceed the stress-rupture strength of metallurgical copper (20-25 kg/mm²). The stress-rupture

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USSR

GERENROT, YU. YU., et al, Zashchita Metallov, Vol 6, No 6, Nov-Dec 70, pp 713-716

strength of vacuum copper condensate 100-700 Å thick reaches 170 kg/mm², and it is entirely possible that galvanic deposits of the indicated thicknesses have at least equal strength. Then the internal stresses arising during electrocrystallization of copper turn out to be commensurate with the stress-rupture strength. It is concluded that the study of stresses occurring in galvanic deposits at low current densities gives reliable information about the interaction of the organic substances in the electrolyte with the surface of the electrode and the mechanism of occurrence of internal stresses.

In galvanic films of identical thickness (100 Å and more) obtained with various current densities (0.005-0.5 a/inch²), the process rate of the post-electrolysis processes is approximately the same. This can be seen from the curves recorded after halting electrolysis. Within the limits of the studied thicknesses (100-1,000 Å) corrected by taking into account the postelectrolysis phenomena, the dependence of the cathode deflection on electrolysis time is rectilinear. The internal compressive stresses for low current densities are unusually high for copper. With an increase in current density the compressive stresses drop sharply. With a further increase in the current density, tensile

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GERENROT, YU. YU., et al, Zashchita Metallov, Vol 6, No 6, Nov-Dec 70, pp 713-716

stresses occur. The higher the concentration of copper sulfate in the solution, the lower the stresses of both signs and the more the sign of the stresses in the deposits varies with greater current density. Simultaneously with this variation, the postelectrolysis phenomena in the copper films cease, and in deposits with tensile stresses no postelectrolysis phenomena are observed.

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UDC 539.3

BELYY, V. Kh., GERG, T. Ya.

"The Problem of Estimating the Accuracy of Solutions in Problems on Concentration of Stresses in a Circular Conical Shell Weakened by a Small Circular Aperture"

Sb. tr. Vses. Zaoch. Politekhn. In-ta [Collected Works of All-Union Polytechnical Correspondence Institute], No 73, 1972, pp 17-20, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 V141 by N. A. Kulakov).

Translation: A "precise" solution, the supplementary stress state of which is described by the equation

$$\Delta \Delta V + \epsilon \beta^2 \left(\sum_{j=1}^{\infty} \epsilon^j \Delta_{k_j} \right) V = 0$$

is compared with an approximate solution, the equation of which is produced by discarding terms with factors $\epsilon^k \beta^2$ ($k = 1, 2, \dots$) and retaining in the boundary conditions only terms of first order relative to ϵ , where V is a

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UDC 539.3

BELYY, V. Kh., GERG, T. Ya., Sb. tr. Vses. Zaoch. Politekhn. In-ta, No 73, 1972, pp 17-20.

complex function, defining the stress-strain state; Δ_{kj} are linear differential operators; β^2 and ϵ are small parameters. It is shown that

$$\|V_\epsilon - V_\epsilon^{(1)}\| < C_{\max}(\epsilon\beta^2; \epsilon^2)$$

where C is a constant, V_ϵ is the "precise" solution, $V_\epsilon^{(1)}$ is the approximate solution. 8 Biblio. Refs.

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1/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--STUDYING THE RATE OF HARDENING OF BINDING MATERIALS USED FOR MAKING

CORES IN HEATED RIGS -U-

AUTHOR-(03)-GERGALOVA, L.M., BORODYANSKIY, L.YE., ZLOBINSKIY, B.A.

COUNTRY OF INFO--USSR

SOURCE--KIEV, TEKHNLOGIYA I ORGANIZATSIYA PROIZVODSTVA, NO 1, 1970, PP
55-57

DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, MATERIALS

TOPIC TAGS--BIBLIOGRAPHY, FOUNDAKY CORE, METAL CASTING, ADHESIVE BINDER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1320

STEP NO--UR/0418/70/000/001/0055/0057

CIRC ACCESSION NO--AP0123279

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123279

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. THE AUTHORS STUDY THE RATE OF
HARDENING FOR BINDING MATERIALS AND GIVE RECOMMENDATIONS ON DETERMINING
THE USEFULNESS OF BINDS FOR PRACTICAL APPLICATION.

UNCLASSIFIED

Foundry

USSR

UDC 669.187.046

ROYTBURD, L. N., IVANOV, I. N., KARPOV, A. G., and GERGAUZ,
G. V., Moscow Engineering-Economics Institute

"Important Reserve for Increasing the Economic Effectiveness
of Electroslag Smelting"

Moscow, Izvestiya VUZ, Chernaya Metallurgiya, No 11, 1973, pp
186-188

Abstract: By now the high national economic effectiveness
of one of the new procedures for improving the quality of
alloyed steels and alloys, that is, the process of electro-
slag smelting, can be considered proven. However there is
still room in the metallurgical enterprises for improving
the effectiveness of this process and its technico-economic
indicators.

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USSR

ROYTBURD, L. N., et al., Izvestiya VUZ, Chernaya Metallurgiya, No 11, 1973,
pp 186-188

The authors discuss some of the ways in which this
can be done with respect to cost of using various alloys
and fluxes.

They have compiled a table which illustrates the
calculations of the cost of one ton of liquid flux employed
in the process.

The article contains 1 table.

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USSR

UDC: 535.376

VLASENKO, N. A., GERGEL', A. N., KONONETS, Ya. F., Institute of Semiconductors, Academy of Sciences of the UkrSSR

"Investigation of Electroluminescence of a $p\text{-CuI-n-ZnS-Mn}$ Film Structure"

Kiev, Poluprovodnikovaya Tekhnika i Mikroelektronika. Resp. Mezhd. Sb., No 7, 1972, pp 78-85

Abstract: A single-stage method is used to synthesize low-voltage electroluminescent film structures having a high coefficient of rectification and capable of light emission with excitation by voltage of both polarities. The authors study the electroluminescence spectra, current-voltage and brightness-voltage characteristics, capacitance, and change in brightness and current density with operating time of the specimen. The observed properties are explained from the standpoint of the impact mechanism of electroluminescence in the case of reverse bias, and the injection mechanism in the case of forward bias. When current flows through the film structure in the forward direction, emission characteristic of both ZnS and CuI is observed. This structure has a longer life than the previously

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USSR

VLASENKO, N. A. et al., Poluprovodn. Tekh. i Mikroelektron. Resp. Mezhd. Sb., No 7, 1972, pp 78-85

known analogous $p\text{-Cu}_x\text{S}-n\text{-ZnS-Mn}$ structure, and may find practical application in various electroluminescent devices.

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USSR

UDC: 535.376

VLASENKO, N. A., GERGEL', A. N., SHKOLA, A. A., Institute of Semiconductors,
Academy of Sciences of the UkrSSR

"Long-Life Electroluminescent Thin-Film D.C. Light Sources"

Kiev, Poluprovodnikovaya Tekhnika i Mikroelektronika. Resp. Mezhd. Sb.,
No 7, 1972, pp 85-87

Abstract: The paper describes the basic characteristics of a new type of electroluminescent thin-film d.c. film structures. The proposed light sources have a service life of about 2000 hours. The film structure is made on the basis of ZnS-Mn by a single-stage method. Maximum emission intensity is in the 585 nm region. The luminance is $20 \text{ cd} \cdot \text{m}^{-2}$ when the applied voltage is 10-25 V and the current density is $0.4-4 \text{ mA} \cdot \text{mm}^{-2}$. The current-voltage and luminance-voltage curves are given for a typical specimen, as well as the change in luminance and current density over 2000 hours of continuous operation of an electroluminescent cell.

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USSR

GERGEL', V. A., KAZARINOV, R. F., SURIS, R. A., Physicotechnical Institute
~~Imeni A. P. Ioffe~~, Academy of Sciences of the USSR, Leningrad

"Nonlinear Theory of Slow Recombination Waves"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 6, Jun 72, pp 1691-1697

Abstract: The nonlinear problem of propagation of slow recombination waves is considered. The types of solutions are classified, and it is shown that soliton domains are one type of slow recombination waves. The current-voltage characteristic of a specimen with soliton domain is calculated, and the stability of the resultant solutions is analyzed. It is shown that the current-voltage curve for a semiconductor with soliton domain has a negative impedance section.

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Acc. Nr: **AP0043796**

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy
Fiziki, 1970, Vol 58, Nr 2, pp **686-698**

RAREFIED IMPERFECT BOSE GAS IN THE FIELD
OF RANDOMLY DISTRIBUTED STATIONARY IMPURITIES

V. A. Gergel, R. F. Kazarinov, R. A. Suris

The behavior of a slightly imperfect Bose gas in the field of randomly distributed impurities is studied. The effect of the impurity atoms on the ground state of the system is determined and found to change the local variation of the condensate density near the impurity atoms. The spectrum and decay of single particle excitations are calculated. The long wave excitation spectrum is found to be acoustic; scattering of the excitations by sound velocity fluctuations induced by the impurity atoms is of the Rayleigh type, i. e. the scattering cross section is proportional to the fourth degree of the excitation wave vector. The results are employed for estimating the light absorption line widths and light amplification due to the Bose — Einstein exciton condensate in semiconductors. For a sufficiently high exciton concentration the width is much smaller than the width of the ordinary exciton absorption line due to scattering of separate excitons by lattice defects imperfections.

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19770205

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USSR

UDC 519.217

GERGEY, T., MEDVEDEV, V. P.

"Study of Ergodic Characteristics of Discrete Single-Line Queueing System"

Teor. Kibernetiki. vyp. 3 [Theory of Cybernetics, No 3 -- Collection of Works], Kiev, 1970, pp 98-112, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V71 by Ye. Kashafutdinova).

Translation: The final probability of loss of a request in a single-line discrete queueing system with a single-place line with constant servicing time N (units of time) and maximum waiting time of requests in the line α (units of time) with a Bernoulli flow at the input is determined. The functioning of the system is described by an ergodic Markov chain $\{\xi_n\}$ ($n = 0, 1, \dots$). The limiting probability as $n \rightarrow \infty$ that the servicing system will be busy is determined. Regularities of the chain dependence between probabilities of states are determined and a semi-Markov process is constructed. Systems of equations for the final probabilities of states of the imbedded chain of the semi-Markov process are solved, and the solution is used to analysis the initial Markov chain. The behavior of the final probabilities of loss with various parameters of the system is illustrated using graphs produced by computer.

1/2 013 UNCLASSIFIED PROCESSING DATE--11SEPT
TITLE--INFORMATION SEMANTIC MODEL AS A BASIS FOR DEVELOPING THE RATIONAL
TEACHING AUTOMATON -U-
AUTHOR--GERGEY, T., POKROVSKIY, YE.A. G
COUNTRY OF INFO--USSR
SOURCE--KIEV, AVTOMATIKA, NO 1, 1970, PP 61-64
DATE PUBLISHED-----70
SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES
TOPIC TAGS--PROGRAMMED LEARNING, MODEL, AUTOMATION, MATHEMATIC LOGIC, SET
THEORY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1989/1481 STEP NO--UR/0102/70/000/001/0061/0076
CIRC ACCESSION NO--AP0107913
ZZZZZZZZZZ UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107913

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN INFORMATION MODEL OF PROGRAMMED LEARNING IS SUGGESTED. THE CONSTRUCTION OF THE MODEL IS MADE IN THE TERMS OF SEMANTIC INFORMATION, USING THE APPARATUS OF MATHEMATICAL LOGIC, SET THEORY AND GRAPHS. AN ANALYSIS OF THE MODEL PERMITS OUTLINING THE APPROACH TO RATIONALIZATION OF INFORMATION RELATION "TEACHING, TEACHING AUTOMATON" WHEN THE RESPONSE OF LEARNING IS EXPRESSED IN CONSTRUCTED FORM.

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UNCLASSIFIED

Acc. Nr: AP0051908

Ref. Code: UR04B

PRIMARY SOURCE: Vrachebnoye Delo, 1970, Nr 2 , pp 42-45

RENAL FUNCTION IN PATIENTS WITH THYROTOXICOSIS BEFORE
AND FOLLOWING RADIOIODINE THERAPY

E. D. Chebotareva, I. G. Gerinshteyn (Kharkov)

Renal function in patients with thyrotoxicosis before and after radioiodine therapy was studied in 57 patients by hemorenal tests and in 77 by radioisotope renography.

Renal changes have been found manifested in disturbances of the local hemodynamics and slowing down of the processes of excretion and secretion.

Radioiodine treatment did not lead to normalization of renal function and in some instances an increase of the renal vascular resistance and deterioration of the secretory-excretory function was observed.

REEL/FRAME
19820391

USSR

UDC 629.78.015.4

VINOKUROV, L. P. and GERINSHTEYN, V. R.

"Determination of Critical Load for a Central Compressed Rod for Calculation of Strain Nonlinearity"

Samoletostr. i Tekh. Vozd. Flota--Nauchn.-Tekhn. Sb. (Aircraft Construction and Air Fleet Technology--Scientific and Technical Collection of Works), No 30, 1973, pp 54-58 (from Referativnyy Zhurnal--Raketostroyeniye, No 5, May 73, Abstract No 5.41.207 by the authors)

Abstract: A method is proved and proposed for calculating the strain nonlinearity, associated with the introduction of a nonlinear degree of strain, suggested by Sveynger and Kerber for tension and developed by the authors for other types of strain. Equations for determining the critical load of a central compressed rod are solved by the proposed "inverse" method which consists of finding a load according to an assigned magnitude of displacement. 2 figures, 1 table.

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1/2 039 UNCLASSIFIED PROCESSING DATE--02JCT70
TITLE--USE OF A TENSILE TESTING MACHINE WITH A PENDULUM FORCE MEASURING
DEVICE FOR STUDYING CREEP IN RUBBER FABRIC COMPOSITE MATERIALS -U-
AUTHOR--(02)-KUCHERSKIY, A.M., GERKE, V.M.
COUNTRY OF INFO--USSR
SOURCE--KAUCH. REZINA 1970, 29(2) 46-8
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--CREEP, MATERIAL TESTING EQUIPMENT, TENSILE STRENGTH, RUBBER,
COMPOSITE MATERIAL, NATURAL FIBER, NYLON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1499 STEP NO--UR/0133/70/029/002/0046/0048
CIRC ACCESSION NO--AP0112493
UNCLASSIFIED

2/2 039

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112493

ABSTRACT/EXTRACT--(U) GP-J- ABSTRACT. A 5 TON TENSILE STRENGTH TESTER WAS EQUIPPED WITH AN ELECTRONIC TENSION REGULATOR AND USED IN CREEP (DELTA L) (L IS THE SAMPLE LENGTH) DETS. OF RUBBER CONVEYOR BELTS AND TRANSMISSION BELTS REINFORCED WITH COTTON (I) OR NYLON (II) WEBBING. THE SAMPLES WERE 1ST STRETCHED WITH A LOAD INCREASING AT 150-200 KG-MIN RATE TO A PREDETD. VALUE. THEREAFTER THE LOAD WAS MAINTAINED CONST. WHILE DELTA L WAS MEASURED WITH PLUS OR MINUS 1PERCENT RELATIVE ERROR. DELTA L OF I BELTING WAS APPROX. 0.5 TIMES DELTA L OF II BELTING AND THIS DIFFERENCE WAS ESTABLISHED AFTER SIMILAR TO 30 MIN TESTING AT CONST. LOAD.

UNCLASSIFIED

USSR

GERLIGA, V. A., YELYUKHIN, V. A., MOROZOV, I. I.

"Acoustic Instability of a Dissociating Gas Flow"

Tr. Vses. nauchno-tekhn. konferentsii po termodinamike. Leningr. tekhnol. in-t kholodiln. prom-sti (Works of the All-Union Scientific and Technical Conference on Thermodynamics. Leningrad Technological Institute of the Refrigeration Industry), Leningrad, 1970, pp 177-182 (from RZh-Mekhanika, No 11, Nov 70, Abstract No 11B475)

Translation: In this paper stability criteria are obtained in a small gas flow in a channel with heat input distributed along the length for cases of reversible (dissociation of molecular hydrogen) and irreversible (decomposition of acetylene) reactions. The pressure losses to friction, the gas acceleration and the variation of the thermophysical properties of the gas along the length of the channel are neglected, and the flow velocity is considered much less than the speed of sound. The Laplace transformation is applied to the linearized system for zero initial conditions and constant values of the pressure at both ends of the channel. The characteristic equation obtained is investigated by means of the Nyquist criterion.

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UDC 535.373.2.096

GERLOVYN, I. YA., TOLSTOY, N. A.

"Effect of Temperature on the Glow of a Concentrated Ruby"

Leningrad, Optika i Spektroskopiya, Vol 28, No 4, April 1970,
pp 833-835

Abstract: This paper contains additional information about the interaction of the glow centers in a ruby obtained as a result of investigating the spectrum and luminescence kinetics of a powdered sample of synthetic ruby in the temperature range of 4.2-293°K. The chromium concentration in the sample was 2 mole%. The results of the investigations are presented in a figure from which the nature of the temperature variations in the luminescence spectrum is clear. It is pointed out that the behavior of the leading R-lines emitted by single chromium ions, two relatively narrow N-lines attributed to paired centers -- dimers -- and the most intense band in the long-wave region with a maximum about 7,800 Å, is of greatest interest. When the temperature is varied from 4.2 to 293°K, the brightness of the N-lines varies by approximately two orders, exceeding the brightness of the R-lines by 1/2

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GERLOVYN, I. YA., et al, Optika i Spektroskopiya, Vol 28, No 4, April 1970, pp 833-835

more than an order, whereas the latter does not experience essential changes throughout the entire indicated temperature range. From this it is concluded that there is an additional channel for quenching N-lines. This channel is the transfer of energy to the centers responsible for the long-wave band of 7,800 Å. Use of pulse excitation which did not, in practice, heat the sample permitted the nature of the temperature variation of the N-line intensity to be traced in detail. However, further research is needed to obtain definite information about the nature of the centers responsible for the 7,800 Å band.

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1/2 024 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--INFLUENCE OF TEMPERATURE ON THE LUMINOSITY OF CONCENTRATED RUBY -U-
AUTHOR-(02)-GERLOVIN, I.YA., TOLSTOY, N.A.
COUNTRY OF INFO--USSR
SOURCE--OPTIKA I SPEKTROSKOPIIA, VOL. 28, APR. 1970, P. 833-835
DATE PUBLISHED-----70
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TOPIC TAGS--LUMINESCENCE, RUBY, SPECTRAL LINE, CHROMIUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
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CIRC ACCESSION NO--AP0124940
UNCLASSIFIED

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PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0124940

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. INVESTIGATION OF THE SPECTRUM AND LUMINESCENCE KINETICS OF SYNTHETIC RUBY POWDER WITH A CHROMIUM CONCENTRATION OF 2 MOL PERCENT AT TEMPERATURES RANGING FROM 4.2 TO 293DEGREESK. THE RESULTS ARE USED TO DERIVE INFORMATION ON THE INTERACTION BETWEEN THE LUMINOSITY CENTERS IN RUBY. IT IS FOUND THAT THE LUMINOSITY OF THE N LINES CHANGES BY ROUGHLY TWO ORDERS OF MAGNITUDE AS THE TEMPERATURE CHANGES FROM 4.2 TO 293DEGREESK, AND THAT IT EXCEEDS BY AT LEAST ONE ORDER OF MAGNITUDE THE LUMINOSITY OF THE R LINES WHICH DOES NOT EXPERIENCE ANY LARGER CHANGES OVER THIS TEMPERATURE RANGE. THIS INDICATES THAT THE DARKENING OF THE N LINES MAY BE ATTRIBUTED TO ENERGY TRANSPORT TO THE CENTERS WHICH ARE RESPONSIBLE FOR THE 7800 A BAND.

UNCLASSIFIED

USSR

UDC: 681.327

GERM, E. I., Institute of Cybernetics, Academy of Sciences of the EstSSR

"Storage Elements"

USSR Author's Certificate No 333601, filed 20 Apr 70, published 20 Apr 72
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 1, Jan
73, abstract No 1B390 P)

Translation: Storage elements are known which contain three cores with rectangular hysteresis loop connected by a coupling winding and having read, record, and output windings. These are high-speed elements which are used in immediate-access memories. However, such elements do not lend themselves to nondestructive data readout. Therefore, restoration measures are necessary for preserving recorded data after readout. This increases the time of access to a storage element and complicates the external equipment.

The purpose of the invention is to provide nondestructive data readout in a storage element based on toroidal cores with magnetic reversal of cores in a complete cycle. By using conventional toroidal cores, design is simplified while retaining reliability and reducing the cost of an element. Magnetic reversal of the cores in a complete cycle gives a high
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GERM, E. I., USSR Author's Certificate No 333601

output signal which simplifies external equipment and increases reliability.

This goal is achieved by incorporating nondestructive readout windings in the proposed storage element. One of these windings passes through the first working core, and another through the second working core. The destructive readout winding and the record winding pass through the information core, and the output winding passes through the working cores.

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Pharmacology and Toxicology

USSR

~~GERMAN, S. M.~~, Candidate of Medical Sciences, Institute of Organic Synthesis, Academy of Sciences Latvian SSR

"Metindione Against Epilepsy"

Riga, Nauka i Tekhnika, No 11, 1971, pp 17-20

Abstract: In 1958, at the Institute of Organic Synthesis, it was discovered that a nitrogen-bearing radical of indandione, previously known only for its ability to inhibit blood coagulation completely changed the physiological properties of the substance to which it was introduced. This new compound did not affect the blood. Three hundred aminoindandione derivatives were tested and were found to possess antiseizure properties. One compound, metindione, was released for clinical studies as a remedy for epilepsy. Experiments with animals showed that its activity differs from all existing compounds and that it is a superior agent. The index of therapeutic activity (relative average lethal dose to average effective dose) is very low (115) compared with, for example, phenobarbital (8.4). It is very fastacting (5-10 minutes) and has a wide range of activity. The higher nervous system is not affected, so the patient can function normally. Both idiopathic and symptomatic epilepsy can be treated with good results. The psychological effect is beneficial, and there are no side-effects in the organs or blood.

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GERMANE, SKAYDRITE, Nauka i Tekhnika, No 11, 1971, pp 17-20

This compound can be taken with other medication. It has not been found, however, to be an anticonvulsant in all circumstances, and until current research on all its possibilities is completed, metindione will not be widely used in medical practice.

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UDC 621.373.826:550:3

GERMAN, A. I., SHULYAKOVSKIY, G. Ye., CHAYANOVA, E. A., GULYAYEV, G. A., ZHURAVLEV, V. F., ZAKATOVA, T. M., and KINYAZ'KIN, V. V.

"Investigating the Effect of the Atmosphere on the Propagation of Coherent Radiation With the Wavelength of $\lambda = 10.6$ Microns"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl. (Tenth All-Union Conference on the Propagation of Radio Waves; Report Theses--collection of works) "Nauka," 1972, pp 179-183 (from RZh--Radiotekhnika, No 10, 1972, Abstract No 10D361)

Translation: Results are given of experiments on the determination of the coefficient of attenuation in coherent measurements (wave of 10.6 microns) as it passes over the uniform ground surface in a range of about 8 km. The radiation source was a stabilized laser on an OKG-15 base, operating in single mode with an output power of 1.2-1.5 W. The radiation was modulated with a 1080 Hz frequency. A diagram of the relative angular distribution of the radiation was given, which permitted the divergence angle of the radiation and the zone of maximum signal level to be determined. All

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GERMAN, A. I., et al., V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl., "Nauka," 1972, pp 179-183

further measurements were made in this zone. The value of the attenuation factor is within the limits of $0.03-0.08 \text{ km}^{-1}$ for clear weather, in the interval of $0.08-0.2 \text{ km}^{-1}$ for light fog and drizzles, and in the range of $0.5-0.6 \text{ km}^{-1}$ for heavy downpours. The proposed method for relative measurements of the attenuation factor gives a measurement error one-half that obtained in the absolute method.

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UDC 621.3.036.539.375-6

GERMAN, A. N., CHATYNYAN, L. A., SAMOYLOV, A. I., POKROVSKAYA, N. G., and
YEGAN, O. M., All-Union Institute of Aviation Materials

"Investigation of the Surface Layers of 30KhGSNA Steel After Electric-Arc
Alloying With Br. MTs-f Bronze and Molybdenum"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 9, No 6, 1973, pp 13-16

Abstract: A study was made of the physical and chemical processes that take place in the electric-arc alloying of 30KhGSNA steel to determine if electric-arc alloying can be used to increase the wear resistance, emission capability, electrical conductivity, and other properties of metals. The steel was investigated after oil quenching and tempering for two hours at 200° C and electric-arc alloyed with Br. MTs-f bronze and Mo in a helium atmosphere using an EFI-ELEKTROM device. Metallographic studies showed that a mechanical mixture of base-metal and coating material particles is formed by this process. Microhardness achieved a maximum value in the layers where there were no bronze inclusions for the bronze-alloyed steel, and in layers where there was some molybdenum in the Mo-alloyed steel. It was noted that the concentration of coating-materials elements and base-metal vary along the depth of the alloyed

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GERMAN, A. N., et al., Fiziko- Khimicheskaya Mekhanika Materialov, Vol 9, No 6, 1973, pp 13-16

layer and were qualitatively identical. Consequently, the mechanism of electric-arc coating formation was analogous for both alloy materials. Friction tests in industrial oil showed that the wear resistance of samples after electric-arc alloying is significantly increased. Five figures, one table, six bibliographic references.

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1/2 019 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--THE SPINAL RETICULAR FORMATION IN THE PATHOGENESIS OF AN ISCHEMIC
DISORDER OF SPINAL CIRCULATION -U-
AUTHOR--(02)--SHARAPOV, B.I., GERMAN, D.G.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970,
VO 70, NR 4, PP 540-545
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SPINAL CORD, HEMORRHAGE, BLOOD CIRCULATION, MORPHOLOGY
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DOCUMENT CLASS--UNCLASSIFIED
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UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0106413

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE BASIS OF A STUDY OF 100 CASES WITH ISCHEMIC DISORDERS OF SPINAL CIRCULATION (WITH A CLINICO MORPHOLOGICAL ANALYSES OF 15 CASES) THE AUTHORS ELIMINATE SOME SYMPTOMS OF SPINAL RETICULAR FORMATION LESIONS. THE MAIN FEATURES CONCERN THE DISTURBED TROPHICAL SYMPTOMS IN THE WALLS OF THE SPINAL CORD (A THICKENING AND RAREFICATION OF THE WALLS), CHANGES IN THE INTERNAL ORGANS (CARDIAC AND RESPIRATORY DISORDERS WITH MICROHEMORRHAGES) AND A DEVELOPMENT OF ISCHEMIC FOCI APART FROM THE MAIN ONE.

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